

WHAT IS CLAIMED IS:

1 1. Apparatus for coating the interior surface of a vessel with a liquid
2 coating material, said apparatus comprising:
3 a first rotating cup having at least one baffle spiraling outwardly counter-
4 clockwise and terminating at a peripheral port;
5 a second rotating cup having at least one baffle spiraling outwardly clockwise
6 and terminating at a peripheral port;
7 means for positioning said first and second rotating cups coaxially with all of
8 said peripheral ports unobstructed, and for simultaneously spinning said first rotating
9 cup counter-clockwise and said second rotating cup clockwise; and
10 means for delivering said liquid coating material to said first and second
11 rotating cups such that when said first and second rotating cups are spinning said
12 baffles and said peripheral ports cause said liquid coating material to be ejected
13 simultaneously from both said first and second rotating cups.

1 2. Apparatus in accordance with claim 1 in which each baffle spirals in a
2 single plane.

1 3. Apparatus in accordance with claim 1 in which said first rotating cup
2 has at least two baffles each terminating at a peripheral port, and said second rotating cup has
3 at least two baffles each terminating at a peripheral port.

1 4. Apparatus in accordance with claim 1 in which said first rotating cup
2 has from four to twelve baffles each terminating at a peripheral port, and said second rotating
3 cup has from four to twelve baffles each terminating at a peripheral port.

1 5. Apparatus in accordance with claim 1 in which said first and second
2 rotating cups are of substantially equal diameter and are displaced from each other along said
3 common axis.

1 6. Apparatus in accordance with claim 1 further comprising:
2 a cylindrical extension on, and coaxial with, said first rotating cup, said
3 cylindrical extension comprising a solid-wall portion adjacent to said first rotating cup
4 and a fenestrated portion adjacent to said solid-wall portion, and

5 a well in said second rotating cup sufficiently wide to receive said fenestrated
6 axial portion of said cylindrical extension.

1 7. Apparatus in accordance with claim 1 in which said means for
2 positioning and simultaneously spinning said first and second rotating cups is a counter-
3 rotating motor comprised of a rod shaft, a hollow cylindrical shaft encircling said rod shaft,
4 and motor drives connected to cause said rod shaft and said hollow cylindrical shaft to rotate
5 in opposite directions, said first rotating cup being affixed to said hollow cylindrical shaft and
6 said second rotating cup being affixed to said rod shaft.

1 8. Apparatus in accordance with claim 1 in which said means for
2 delivering said liquid coating material is a single conduit with two openings sufficiently
3 spaced apart that when one said opening is positioned inside said first rotating cup the other
4 said opening is positioned inside said second rotating cup.

1 9. Apparatus in accordance with claim 1 further comprising liquid joining
2 means for combining two components of a liquid coating material, and static mixing means
3 for mixing said combined components upstream of said means for delivering said liquid
4 coating material to said first and second rotating cups.